

SIRBU, Octavian, ing.

One more method for increasing the service of railroad  
wooden sleepers. Rev cailor fer 11 no. 12: 690-692 D 1 63.

**EXCERPTA MEDICA** Sec 10 Vol 10/11 **Obstetrics** Nov 57, ...

1928. SIRBU P., TEODORU G.C., TEODORESCU I. and RADULESCU I. \* Cercetări asupra hidremiei tisulare, permeabilității și rezistenței capilare la grăvide. *Tissue hydraemia, permeability and resistance of capillaries in pregnancy* OBSTET. GINEC. (București) 1956, 4/3 (234-240)

Using Odier's technique with i.v. injection of sodium rodanate, a study was made on the volume of extracellular water (rodane space) in normal and in pathological pregnancies. It was found that the amount of water in the 'rodane space' in normal pregnancy was slightly increased (26%) as compared with non-pregnant women (24%). In pregnant patients suffering mainly from decompensated heart diseases, cirrhosis, hepatonephritis, disorders of pregnancy, especially eclampsia, markedly increased figures were observed (35-45%). In disorders of pregnancy it was confirmed that the increase of water in the 'rodane space' occurred before the clinical manifestations and that it may also have a prognostic value. Likewise with Landi's technique the capillary permeability was found to be slightly increased during pregnancy and considerably increased in the case of disorders of pregnancy. A slight diminution of the capillary resistance (Von Borbely's test) was observed towards the end of pregnancy, although it remained between the normal values observed outside pregnancy.

Aburel - Bucharest

EXCERPTA MEDICA Sec 10 Vol 10/12 Obstetrics Dec 57

2154. SIRBU P., MURESAN V., TEODORU G. C., PASCU F., TOMESCU I. and RADULESCU T. Centre d'Obstet., et de Gynécol., Bucarest. "Etudes expérimentales dans la chirurgie de la stérilité. Experimental studies in the surgical treatment of sterility C. R. SOC. FRANÇ. GYNÉC. 1956, 26, 6 (288-294) Illus. 6

Report on experiments with arterial and venous homografts in the uterine horn of the dog. After resecting 2 or 3 cm. of the intra-uterine portion of the fallopian tube, first a vein was grafted in a first series, then an artery in a 2nd series; in both cases the lumen of the grafted vessel was obstructed. In a 3rd series, in which use was made of an arterial graft with a mandrin of methyl metacrylate, preservation of the arterial lumen was observed in spite of the fibroblastic reaction of the tissues (it is not stated whether the mandrin was removed before biopsy was taken). It would be interesting to see what happens with the arterial lumen several days or several weeks after withdrawal of the mandrin. A gradual slipping of the covering epithelium of the uterine horn over the borders of the fragment of the preserved artery was observed, which suggests the possibility of an epithelialization of the arterial graft provided that a mandrin maintains its permeability.

Gaudefroy - Lille

SIRBU, P. EXCERPTA MEDICA Sec 10 Vol.11/8 Obstetrics Aug 58

1381. CERVICO-ISTHMECTOMY BY THE ABDOMINAL ROUTE WITH IMPLANTATION OF THE UTERINE BODY INTO THE VAGINA IN THE SURGICAL TREATMENT OF LARGE TUMOURS OF THE CERVIX - Cervico-isthmection par voie abdominale avec implantation du corps utérin au vagin dans le traitement chirurgical des grosses tumeurs du col - Sirbu P. and Cringu M. Bucarest - C. R. SOC. FRANC. GYNÉC. 1957, 27/6 (244-247) Illus.8

The operation is the same as that advocated by Aburel for cancer of type O and in microcancers. Technique: (1) subumbilical laparotomy; (2) exploration of the abdomen; (3) introduction of a 'corkscrew' into the fundus of the uterus; (4) incision of the peritoneum first in longitudinal and then in transverse direction; opening of the vagina; (5) sectioning of the round ligaments, which facilitates the access to the vessels; (6) detachment of the tumour and haemostasis; (7) sectioning of the peritoneum on the tumour; (8) opening of the posterior wall of the vagina and extirpation of the tumour; (9) implantation of the uterine body into the vagina by means of 2 catgut sutures one placed anteriorly and the other posteriorly, through the inferior pole of the uterus, closest to the endometrial cavity and through the corresponding wall of the vagina closest to the mucosa; (10) peritonization of the posterior part and the lateral parts; (11) restoration of the round ligaments; if the ligaments are too long, they should first be shortened; (12) the position of the uterus is maintained by peritonization with the vesical peritoneum; (13) closure of the abdomen after application of penicillin. No circulatory disturbances will result from this operation, in spite of the ligature of the 3 arteries. Laffont - Algiers (X. 5, 16)

EXCERPTA MEDICA Soc 10 Vol.11/8 Obstetrics Aug 58

1346. CLINICAL CONSIDERATIONS ON 20 CASES OF UTERINE SYNECHIAE -  
Considérations cliniques sur 20 cas de synéchies utérines - Sirbu P.,  
Coman A. and Vexler E. Centre Obstét. et Gynécol., Bucarest  
GYNEC. ET OBSTET. 1957, 56/5 (521-528) Illus. 6

The most frequent aetiological factors are: curettage and infection. The highest incidence is found after curettages post-partum and post-abortum. Uterine synechiae are an important factor in the aetiology of sterility and habitual abortion, as well as in menstrual disorders (hypomenorrhoea, oligomenorrhoea, aménorrhoea). Radiological examination is indispensable in all cases, instrumental examination alone being insufficient in case of cervico-isthmic synechiae associated with uterine synechiae. Biopsy of the endometrium reveals the disturbances of receptivity of the uterine mucosa. In addition to the uniform histocytological pictures of endometrial hypoplasia, disturbances of the endometrial receptivity are frequently encountered: endometrial zones in an almost normal oestrogeno-progesteronic phase neighbouring on hypoplastic endometrial areas and insufficient development of the vascular system. Only total synechiae that are several years old will directly benefit from surgical treatment. In other cases the best policy is to await the result of small vaginal operations before deciding on a major operation by the abdominal route. In this manner, persistent amelioration of the menstrual function was obtained in 13 out of the 20 cases studied. There were 3 pregnancies brought to term with normal children.

~~SIRBU, P.~~ [Sirbu, P.]; BUTNARU, I. [Bitnaru, I.]; PEUNESCU, V. [Peinescu, V.],  
student

Interadnexal hysterectomy with preservation of the endometrial  
flap in the treatment of multiple fibroma of the uterus. Akush.  
i gin. 37 no.1:76-79 '61. (MIRA 14:6)

1. Iz rodil'nogo doma Zyuleshty (Bukharest).  
(UTERUS--TUMORS) (HYSTERECTOMY)

JULIA LIA

SIRBU, P., MD; POPOVICI, Agora, MD.

"Giulostii" Hospital for Women's Diseases, Bucharest (spitalul de femei "Giulostii", Bucuresti) - (for all)

Bucharest, Vîata Medicală, No 22, 15 Nov 63, pp 1547-1552

## "The Treatment of Malignant Tumors of the Ovaries."

SIRBU, Rodica, Ing.; FIKETI, Reian, Ing.

Possibilities of utilization of ion exchange resin for analyzing  
anionic dyestuffs. Industria usocra II no.3:109-III Mr'64

SIRBU, Rodica, ing.; FEKETE, Raisa, ing.; ELOPATAKI, Ladislau, dr;

Contributions to the knowledge of indigenous synthetic  
tannins. Industria usoara 10 no.6:225-227 My '63.

IUGA, Gheorghe, ing.; Dr.

Constantin, ing.; SIRBU, Rodica, ing.

Hydrophily of leathers tanned with polyaromatic substances.  
Industria usoara IJ no.5:324-336 Ag '63.

STANESCU, N., ing.; SIRBU, V., ing.

Control station for the purification of the residual water in  
the pulp, paper, and artificial fiber industries. Cei hirtie  
14 no.1:27-30 Ja '65.

*Sirbu, Z.*

MITROIU, P.  
SURNAME (in caps); Given Name

Country: Romania

Academic Degrees: Veterinarian

Affiliation: Institute of Pathology and Animal Hygiene (Institutul de Patologie si Igiena Animalei).

Sources: Bucharest, Probleme Zootehnice si Veterinare, No 6, 1961,

pp 57-62.

Date: "Data on a Botulinic Intoxication With Siloed Fodder In HORSES."

Co-authors:

UNGUREANU, G., Dr., Institute of Pathology and Animal Hygiene (Institutul de Patologie si Igiena Animalei).

GREGIANU, Al., Veterinarian, Institute of Pathology and Animal Hygiene (Institutul de Patologie si Igiena Animalei).

SIRBU, Z., Dr., Institute of Pathology and Animal Hygiene (Institutul de Patologie si Igiena Animalei).

APTEANU, M.D., Veterinarian, Food and Fodder Control Laboratory (Laboratorul de Control al Alimentelor si Purajelor).

RUMANIA

SIRBU, Z., Dr of the I.C.V.B. "Pasteur" [Institutul de Cercetari Veterinare si Biopreparate "Pasteur"; "Pasteur" Institute for Veterinary Research and Biological Products] and NISTOR, Tr., Dr, of the Slaughter-House of Bucharest (Abatorul Bucuresti).

"A Case of Pseudo-Tumoral Tuberculosis of the Trachea in Cattle."

Bucharest, Revista de Zootehnie si Medicina Veterinara, Vol 13, No 11, Nov 63, pp 74-75.

Abstract: A clinical case report of a 14-year old cow of the Rumanian Baltata breed. The histological examination revealed the presence of tuberculosis bacilli.

Includes 1 figure and 4 references, of which 2 Rumanian, 1 French and 1 Russian.

1/1

SIRBU, Zamfir, dr.

Blood groups. St si Teh Buc 16 no.11:16-17, 44 N '64.

1. "Pasteur" Institute for Veterinary Research and Biopreparates.

RUMANIA

CROITORU, I. I., Dr, and SIRBULESCU, C., Dr, of the Oltenia Regiune Agricultural Council (Consiliul Agricol Regional Oltenia).

"Results of the Gynaecological Investigation of Livestock in Oltenia Regiune."

Bucharest, Revista de Zootehnie si Medicina Veterinara, Vol 13, No 8, Aug 63, pp 39-45.

Abstract [Authors' English summary modified]: As a result of their analysis of the gynecological study, the authors recommend such a study as the starting point for any artificial insemination practices. In existing stations, such studies should be carried out every autumn in order to estimate the results of the past year and to take the appropriate technical and organizational measures that will lead to an increase in fecundity.

Includes 23 references, of which 2 German, 1 French and 20 Rumanian.

1/1

TEODORESCU, P. Prof.; BERCEANU, St., Dr.; LINIS, M. Dr.; SIRBUIESCU, R. Dr.

Endomyocardofibrosis; clinical and morphopathological aspects.  
Med. int., Bacur. 9 no.5:74-751 May 57.

1. Lucrare efectuata in Clinica si VI-a medicala I.M.Y. si Spitalului  
Dr. I. Cantacuzino.

(HEART DISEASES  
endomyocardial fibrosis, clin. & pathol. aspects)

TEODORESCU, P.; SIRBULESCU, R.

The U wave in clinical electrocardiography. Med. int., Bucu., 10 no.4:  
575-584 Apr 58.

1. Clinica a III-a medicala I.M.F., Bucuresti.  
(ELECTROCARDIOGRAPHY  
U wave & TU segment in various pathol. cond.)

TEODORESCU, P.; STEFAN, I.; LILIS, M.; SIRBULESCU, R.; CONSTANTINESCU, P.;  
TINGU, S.

The adrenal glands & cardiac failure: functional tests & therapeutic  
attempts. Rumanian M. Rev. 3 no. 1:15-21 Jan-Mar 59.

(CONGESTIVE HEART FAILURE

adrenal cortex funct. & prednisone ther.)

(ADRENAL CORTEX, physiol.

in congestive heart failure, application to prednisone  
ther.)

(PREDNISONE, ther. use

congestive heart failure, indic. by adrenal cortex funct.)

TEODORESCU, P., prof.; STEFAN, I.; LILIS, M.; SIRBULESCU, R.; TINCU, S.;  
POMPILIAN, P.

Contributions to the functional characterization of the adrenal cortex  
in heart failure. Rumanian M Rev. no.1:272 Ja-Mr '61.

1. Medical Clinic, Cataruzino Hospital, Medicopharmaceutical Institute,  
Bucharest. Head of the Clinic: Prof. P. Teodorescu.  
(ADRENAL CORTEX physiology) (HEART FAILURE, CONGESTIVE physiology)

TEODORESCU, P., prof.; LILIS, M., dr.; STEFAN, I., dr.; TINCU, Silvia, chemist;  
SIRBULESCU, R., dr.; POMPILIAN, P., dr.; GUCU, N., dr.; STERIAN, Ileana

Treatment with sulfonamide diuretics in refractory cardiac insuffi-  
ciency. Med. intern., Bucur 13 no.1:121-135 Ja '61.

(HEART FAILURE, CONGESTIVE therapy)  
(CHLOROTHIAZIDE related cpds)

TEODORESCU, P., prof.; CARP, C., dr.; SIRBULESCU, R., dr.†

Etiopathogenetic and clinical study of 50 cases of unstable bundle branch block. Med. intern., Bucur 13 no.2:179-193 F '61.

1. Lucrare efectuata in Clinica medicala, Spitalul "Bernat Andrei", I.M.F. Bucuresti.

(HEART BLOCK)

TEODORESCU, P., prof.; SJIRBULESCU, R., dr.; DEGERATU, T., dr.; POMPILIAN, P., dr.; NICOLAESCU, V., dr.; GEORGESCU, M., dr.

Clinical and therapeutic aspects of fixed and malignant forms of arterial hypertension. *Med. inter.*, Bucur 13 no.3:353-358 Mr '61.

1. Lucrare efectuata in Clinica a III-a medicala I.M.F., Bucuresti.  
(HYPERTENSION therapy)

TEODORESCU, P., prof.; SIRBULESIU, R., dr.; POMPILIAN, P., dr.;  
DEGERATU, T., dr.; TINCU, S., chim.

Treatment with guanethidine in severe forms of hypertensive  
disease. Med inter 15 no. 5:613-617 My '63.

1. Lucrare efectuata in Clinica a III-a medicala, Spitalul  
"Bernat Andrei" I.M.F., Bucuresti.  
(HYPERTENSION) (GUANETHIDINE)

NICOLAESCU, V., dr.; SIRBULESU, R., dr.; ANGHEL, E., dr.; CIMPEANU, S., dr.; TEODORESCU, P., prof.

Comparative study of the effectiveness of drug therapy in hypertensive disease. Med inter 15 no. 5:631-637 My '63.

1. Lucrare efectuata in Clinica medicala a Spitalului  
"Bernat Andrei" (director: prof. P. Teodorescu)  
(HYPERTENSION) (VASODILATOR AGENTS) (RESERPINE)  
(HYDROCHLOROTHIAZIDE) (GUANETHIDINE) (HYDRALAZINE)

RUMANIA

SIRBULESCU, V., Eng, of the Faculty of Veterinary Medicine (Facultatea de Medicina Veterinara), Bucharest.

"Aspects Concerning the Effect of Selection in Terms of the Criterion Aimed at and the Intensity of Selection in the Improvement of the Milk Production of Cows."

Bucharest, Revista de Zootehnie si Medicina Veterinara, Vol 16, No 10, Oct 66, pp 56-62.

Abstract: The author studied the effectiveness of using quantity of milk and/or percentage of fats and proteins as criteria for selection; the study involved 194 cows of the Rumanian Baltata strain, followed during the lactation period, for whom the selection difference and selection effect data are presented. Because of the negative correlation between the criteria, it is concluded that an appropriate combination of all three factors must be used for best results in the improvement of milk production.

Includes 4 tables and 12 references, of which 9 Rumanian, two German and one French.

1/1

SIRCA, D., dr.

False-negative L.E.phenomenon. Med. intern. (Bucur.) 16 no.6:  
671-675 Je'64

1. Lucrare efectuata la S.M.B., "Victoria", Regiunea Crisana.

SIRCA, F.

Introduction to the metallography of iron-carbon alloys. (To be contd.) p. 81  
VARILNA TEHNIKA, Ljubljana, Vol 3, No. 3, 1954

SO: EEAL, Vol 5, No. 7, July, 1956

SIRCA, F.

Introduction to the metallography of ironcarbon alloys.  
p. 118. Vol. 3, No. 4, 1954. VARILNA TEHNIKA.  
Ljubljana, Yugoslavia.

SOURCE: East European Accessions List, (EEAL) Library  
of Congress, Vol. 5, No. 8, August, 1956.

✓ 15973\* The Diffusion Phenomena of Copper in Iron. Pri-  
spevek k fenomenologiji difuzije bakra v železo. (Slovenian.)  
Martin Žumer and Franc Šteca. Rudarsko-metalurški zbornik,  
1955, no. 1, p. 25-33.

Qualitative aspect of the diffusion of electrolytic Cu in  $\gamma$  and  
 $\alpha$  iron at 1150, 1089 (epsilon phase), 1050 (both in solid  
state), and 750 C (modification of  $\alpha$  iron); difference between  
speed of intergranular and vol. diffusion; frontal diffusion at  
temperatures above 1100 C; effect of impurities. Micrographs,  
graphs, diagrams, photograph. 10 ref.

(1)

SIRCA, F.

✓ 2599° Dislocation of Crystal Boundaries in Secondary Recrystallization. O premikih kristalnih mej ob sekundarni rekristalizaciji. (Slovenian.) Matija Zumer and Franc Sirc. Rudarsko-metalurški zbornik, 1955, no. 3, p. 173-176. MG Study of ferrite grain changes in recrystallization at 1050 to 1100 C. Describes two possible mechanisms of the process. 4 ref.

① Df

SIRCA, Franc, dr., ing., docent

The influence of alphagene elements on the diffusion of copper in  
alpha iron. II. Rud met zbor no.4:377-387 '61.

1. Oddelek za montanistiko Fakultete za naravoslovje in tehnologijo  
Univerze v Ljubljani Askerceva 20, Ljubljana.

(Diffusion) (Copper) (Iron)

SIRCA, F.

"Modern physical metallurgy." Reviewed by F. Sirca. Rud met  
abor no.1:47 '62.

SIRCA,F.

"Metallographic atlas of unified steels." Reviewed by F.Sirca.  
Rud met zbor no.1:54 '62.

SIRCA, F.

"Proceedings of the International Conference on Semiconductor Physics." Reviewed by F.Sirca. Rud met zbor no.1:54 '62.

SIRCA, F.

"Lessons on metallurgy and metallography" by Raffaello Zoia.  
Pt. 1: "General principles;" Pt. 2: "Siderurgy." Reviewed by  
F. Sirca. Rud met zbor no.1:73 '62.

SIRCA, F.

"Quantum mechanics" by John L. Powell and Bernd Crasemann.  
Reviewed by F. Sirca. Rud met zbor no.1:77 '62.

SIRCA, F.

"Elements of physical metallurgy" by Albert G. Guy, 2d ed.  
Reviewed by F. Sirca. Rud met zbor no.1:69-70 '62.

SIRCA, F.

"Handbook on nonferrous metals," 2d, rev. ed., by Hans Steuvel and others. Reviewed by F. Sirca. Rud met zbor no.1:73-74 '62.

SIRCA, Franc, dr. inz., docent; KOSOVINC, Ivan, inz., asistent

Use of colored photography in heat etching of metals  
and castings. Rud met zbor no.3:209-217 '62.

1. Katedra za metalografijo na oddelku za montanistiko  
Univerze v Ljubljani, Askerceva 20, Ljubljana.

SIRCA, F.

"Metals reference book" by Colin J. Smithells. 3d ed.  
Vol. 1 & 2. Reviewed by F. Sirca. Rud met zbor no. 3:261-262  
'62.

SIRCA, F.

"The rare earths," edited by F.H. Spedding and A.H. Daane.  
Reviewed by F. Sirca. Rud met abor no.3:262 '62.

SIRCA, F.

"Direct observations of imperfections in crystals,"  
edited by J.B. Newkirk and J.H. Wernick. Reviewed by  
F. Sirca. Rud met zbor no.3:266-267 '62.

SIRCA, F.

"Entropy" by J.D. Fast. Reviewed by F. Sirca.  
Rud met zbor no.3:272 '62.

SIRCA, F.

"Ferrites" by J. Smith and H.P.J. Wijjn. Reviewed by  
F. Sirca. Rud met zbor no.3:278 '62.

SIRCA, F.

"Powder metallurgy," edited by Werner Leszynski. Reviewed  
by F. Sirca. Rud met zbor no.3:365 '62.

SIRCA, F.

"Abstract on nuclear energy" by G. Cahen, and P. Treille.  
3d ed. Reviewed by F. Sirca. Rud met zbor no.1:77 '63.

K. Cazafura; PAVKO, D.; SIRCA, F.; KERSNIC, Viktor, prof. dr. inz.;  
KOSAK, K.; GRAFENAUER, S.; PODGORNIK, A.; KERNC, J.; DOBOVISEK,  
Bogomir, docent, dr. inz.; OCEPEK, Drago, docent, dr. inz.;  
HOMAN, A.; MARCEC, M.; RANKEL, J.; CRNIVEC, M.; SMAJIC, N.;  
CUCEK, I.; KERSNIC, V., ml.; VODOPIVEC, F.

New books. Rud met zbor no. 2:144-187 '63.

1. Glavni urednik, "Rudarsko-metalurski zbornik" (for  
Viktor Kersnic).
2. Clani Uredniskega odbora, "Rudarsko-metalurski zbornik"  
(for Dobovisek and Ocepek).

SKALA, I.

SKALA, I. Applying mechanization to methods of building earthworks and transportation in road construction. p. 432.

Vol. 1, No. 5/9, Aug./Sept. 1956.

STATE INSTITUTE

TECHNICAL

Zagreb, Yugoslavia

See: East European Accession, Vol. 6, No. 2, February 1957

SIRCELJ, M.

Building of the cable railroad in Anhovo p. 6,  
(GLASNIK, VOL.8, NO. 41/42, 1956/57)

SO: Monthly List of East European Accessions (EEAL) LC Vol. 6, No. 12, Dec. 1957  
Uncl.

SIRCHENKO, A.G., inzh.

Installing and servicing the "Reka" echo depth sounder. Rech.transp.  
17 no.10:50-52 0 '58. (MIRA 11:12)  
(Sonar) (Inland navigation)

SIRCHENKO, I.P., inzh.; SILIN, Ye.M.; LOBUNETS, V.I.

Making an intermediate entry at a speed of 250 m. per  
month. Shakht.stroi. 4 no.7:28-29 J1 '60.  
(MIRA 13:7)

1. Shakhta "Krasnopol'skaya-Glubokaya" (for Sirchenko).
2. Ukrainskiy nauchno-issledovatel'skiy institut organizatsii  
i mekhanizatsii shakhtnogo stroitel'stva (for Silin). 3. Khar'-  
kovskiy gornyy institut (for Lobunets).  
(Mining engineering)

VELIKIY, I.G., inzh.; NOVIKOV, N.V., inzh.; SOKOLOV, A.Kh.;  
SIRCHENKO, I.P.

I.S. Rod'kin's book "Ventilation in the course of mine building."  
Shakht. stroi. 5 no.8:30 Ag '61. (MIRA 16:7)

1. Trest Kadiyevpodzemshakhtostroy (for Velikiy, Novikov).
2. Shakhta Mariya-Glubokaya (for Sokolov). 3. Shakhta  
Krasnopol'ye-Glubokaya (for Sirchenko).  
(Mine ventilation)

SIRCHENKO, V.A., inzh.; SHUSTIKOV, G.S., inzh.

Mechanized production line in the fish freezing section.  
Sudostroenie 27 no.11:17-18 N '61. (MIRA 15:1)  
(Refrigerator ships)

SIRCHENKO, Z.F.

Existence and properties of an almost periodic solution to  
an equation of standardized form in Hilbert space near the  
equilibrium point. Dop. AN URSR no. 9:1132-1135 '64.

(MIRA 1':II)

1. Institut matematiki AN UkrSSR. Predstavлено академиком  
AN UkrSSR Yu.A. Mitropol'skim [Mytropol's'kyi, I.U.O.].

SIRCHENKO, Z.F.

Extension of a theorem of N.N.Bogoliubov to the case of a  
Hilbert space. Ukr.mat.zhur. 16 no. 3:339-350 '64.  
(MIRA 17:7)

244200  
163500

37530  
S/041/62/014/002/007/008  
B172/B112

AUTHOR: Sirchenko, Z. F.

TITLE: Application of the method of mean values to partial differential equations

PERIODICAL: Ukrainskiy matematicheskiy zhurnal, v. 14, no. 2, 1962,  
222-227

TEXT: A hyperbolic equation containing a perturbation term,  
$$\frac{\partial^2 u}{\partial t^2} - c^2 \frac{\partial^2 u}{\partial x^2} = \gamma u + \varepsilon F\left(t, x, u, \frac{\partial u}{\partial t}, \frac{\partial u}{\partial x}\right)$$
, where  $\varepsilon$  is a small parameter, is considered under certain initial and boundary conditions; and approximate solutions with an accuracy  $\varepsilon^m$  ( $m = 1, 2, 3, \dots$ ) are sought. For this purpose the partial differential equation is reduced to an infinite system  
$$\frac{dz_n}{dt} = \varepsilon z_n(t, z_k) \quad (n, k = \pm 1, \pm 2, \dots)$$
 with  $z_n(t)$  as unknowns. Systems approximating to this can be obtained by averaging, for instance,

Card 1/2

Application of the method of mean ...

S/041/62/014/002/007/008  
B172/B112

$\frac{dz_n}{dt} = \epsilon \sum_t \{ z_n(t, z_k) \}$  ( $n, k = \pm 1, \pm 2, \dots$ ) as a first approximation, whence

a linear, infinite system is obtained. The conditions for convergence are due to D. S. Los'. A detailed description of the procedure, in which  $z_n(t)$  can be calculated successively, is given for two particular functions  $F$ . ✓

SUBMITTED: August 20, 1961, Kiyev

Card 2/2

SIRCHICH, I., OUNZ, Piešťany

Diabetes in children. Lek. obzor 3 no.5:282-285 1954.

1. Z detského oddelenia OUNZ Piešťany  
(DIABETES MELLITUS, in infant and child  
diag. & ther.)

VASHCHENKO, M.A.; SIRCHIN, A.M.

Method of registering electroexcitability of the muscles  
using a piezocrystal. Zhur. nevr. i psikh. 62 no.2:291-292  
'62. (MIRA 15:6)

1. Institut infektsionnykh bolezney AMN SSSR, Kiyev.  
(ELECTROMYOGRAPHY)  
(PIEZOELECTRIC SUBSTANCES)

Sîrghiș, A.

✓622. Sîrghiș, A., Construction method of a shell-type roof structure in prestressed concrete consisting of precast elements (in Romanian), *Indust. constr. Mater. constr.* 7, 6, 461-469, 1956.

Roof covering a building  $43.8 \times 15.34 \text{ m}$  ( $143 \times 51 \text{ ft}$ ) consists of 10 barrel shells, spanning across the building with 14.32-m clearance, each barrel shell being assembled of 10 sections supported by  $30 \times 50\text{-cm}$  ( $12 \times 20\text{-in.}$ ) prestressed concrete girders. These girders carry also longitudinal barrel shell along the center line of the building resting on skylight walls. Thickness of shells is 3 cm ( $1\frac{1}{4}$  in.). Prestressing methods were proposed by engineers St. Angelescu, E. Raiculescu, M. Halmagiu, and I. Finchelstein. Of special interest is the comparison with a typical reinforced-concrete roof that would require following amounts of materials per  $\text{m}^2$  of roof structure (actual quantities in parentheses): steel, 60.9 kg (15.28); timber, 0.6  $\text{m}^3$  (0.09); concrete, 15.9 cm (11.2).

J. Polívka, USA

2

SIRCHIS, A.; BAICULESCU, E.

Construction of an industrial passageway of prefabricated concrete; design and execution. p. 191.

REVISTA CONSTRUCTIILOR SI A MATERIALELOR DE CONSTRUCTII. (Asociatia Stiintifica a Inginerilor si Tehnicienilor din Romania si Ministerul Constructiilor si al Materialelor de Constructii) Bucuresti, Romania. Vol. 10, no. 4, April 1958.

Monthly list of East European Accessions (EEAI) LC Vol. 9, no. 2, Feb. 1960

Uncl.

SIRGHIS, A.

A method of returning sluing cranes. p. 224.

REVISTA CONSTRUCTIILOR SI A MATERIALELOR DE CONSTRUCTII. (Asociatia Stiintifica a Inginerilor si Tehnicienilor din Romania si Ministerul Constructiilor si al Materialelor de Constructii) Bucuresti, Rumania. Vol. 10, no. 4, April 1958.

Monthly list of East European Accessions (EEAI) LC Vol. 9, no. 2, Feb. 1960

Uncl.

SIRCU, I.

Problem on the stationary glaciation in the Marasures Mountains.  
Anal St Jassy II 9:125-134 '63.

SIRCU, I., conf. univ. (Iasi)

Some data connected with the Quaternary glacial epoch  
in the Rumanian Eastern Carpathians. Natura Geografie  
16 no.3:24-31 My-Je '64.

SIRCZ, Janos

Safety engineering of ferroalloy manufacture. Munkavedelem.  
10 no.7/9:25-29 '64.

1. Scientific Research Institute of Labor Protection of the  
Central Council of Hungarian Trade Unions, Budapest.

FISHER, S.L.; PERMINOV, A.M.; RADCHENKO, I.I.; PODDUBNYY, I.Ya.; LOBACH, M.I.;  
HELGORODSKIY, I.M.; Prinimali uchastiye: VALENINA, V.F.;  
GRECHANOVSKIY, V.A.; UKHALOV, N.T.; ATLASOVA, L.A.; SIRE, Ye.M.;  
PANOV, P.I.

Manufacture of butadiene-styrene (methyl-styrene) rubber according  
to the iron-trilon-rongalite compounding formula with the use of  
rosin emulsifiers. Kauch.i rez. 22 no.1:9-15 Ja '63.

(MIRA 16:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo  
kauchuka imeni S.V.Lebedeva.

(Rubber, Synthetic) (Styrene)

SIREK, J.

No translation. Rozhl.tuberk. 10 no.5-6:103-116 1950. (CLML 20:6)

1. Of the Lung Sanatorium (Head--Sire.M.D.), Jince.

SIREK, O.  
(6370)

II Int. Klin., Stockholm. Cholin ako lipotropny faktor  
Choline as a lipotropic factor Bratislavské Lekarske Listy, Bratislava 1949, 29/2 (39-40 and  
187-199) Illus. I

There are four theories attempting to explain the influence of choline on lipid metabolism: Choline (1) is a methyl donor, (2) is a factor controlling the oxidative processes in liver, (3) accelerates the transport of lipids, (4) is a component of a coenzyme of unknown nature. According to the author's survey of the literature, the role of choline in fat metabolism is not yet certain.

Wenig - Prague

So: Excerpta Medica, Vol. II, No. 12, Sec. II, December 1949

SIRAKANYAN, Rafael' Vardanovich; MKRTUMYAN, H.A., md.; CHAKHALYAN, TS.P., tekhn.red.

[Theory of the smooth running of a crawler tractor with a semi-rigid running gear] Teoriia plavnosti khoda gusenichnogo traktora s poluzhestkim khodovym ustroistvom. Erevan, Izd-vo M-va sel'.khoz.Armianskoi SSR, 1959. 174 p.

(MIRA 13:11)

(Crawler tractors--Dynamics)

L 00268-66 EMT(1)/T/FCS(k) WR  
ACCESSION NR: AP5024724

UR/0108/65/020/008/0031/0038  
621.396

34

AUTHOR: Pokras, A. M. (Active member of scientific technical society for radio-  
engineering and electrical communication); Sirenev, V. S. (Active member of  
scientific technical society for radioengineering and electrical communication)

TITLE: Compact antenna with a radiation pattern that is omnidirectional in the  
horizontal plane and compressed in the vertical plane

SOURCE: Radiotekhnika, v. 20, no. 8, 1965, 31-38

TOPIC TAGS: omnidirectional antenna, antenna engineering, antenna radiation  
apattern

ABSTRACT: A new compact antenna with an omnidirectional radiation pattern for use  
in air navigation or TV broadcasting is reported. The antenna operates in  
the centimeter band, and the pattern in the horizontal plane is circular,  
with a deviation of less than ±2db for a 12% frequency band. Half-power  
beamwidth in the vertical plane does not exceed 6°.

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ACCESSION NR: AP5024724

The new omnidirectional antenna is claimed to surpass the achievements of Willoughby and Heider — the Australians who have developed a vertically polarized parabolic antenna — and those of an American team headed by S. R. Jones — developers of a uhf TV antenna now mounted on the Empire State Building. The Soviet antenna does not have the large vertical side lobes of the Australian model, and its circular horizontal pattern is more uniform than the  $\pm 5.5$  db specified for the American model. In addition, its physical size is smaller than either model.

The omnidirectional pattern with circularity of  $\pm 2$  db for a 12% frequency band is achieved by two dipole arrays symmetrically distributed on the opposite sides of the screen. The beamwidth of the radiation pattern in the vertical plane is controlled by the array length, while the required circularity is attained by the dipole shape and dimensions, the distance of the dipole from the screen, and the width of the screen.

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ACCESSION NR: AP5024724

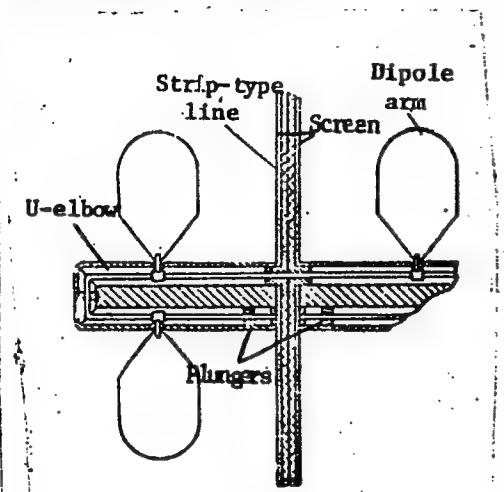


Fig. 1. Side view of antenna

As a starting point in the design, the initial element dimensions were derived for a model consisting of a pair of dipoles separated by a distance  $d$ , generating a partial radiation pattern with vertical polarization. Planar dipoles mounted perpendicularly to the screen were selected with dipole arms of  $0.3-0.4\lambda$ . The distance from the dipole axis to the screen was  $0.25\lambda$ , and the screen width,  $0.66\lambda$ . The geometrical distribution of the elements is shown in Fig. 1.

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L 00268-66

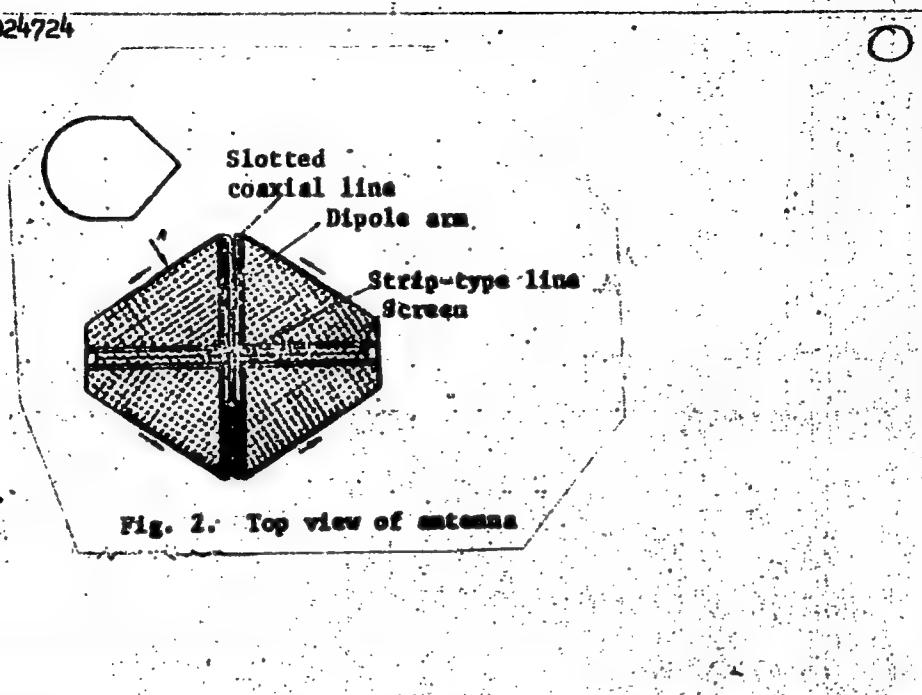
ACCESSION NR: AP5024724

The 200—250- $\Omega$  input impedance of the dipole matched with the 50- $\Omega$  strip line from the supply system by a balanced feed method utilizing a U-elbow to ensure equal in-phase currents in the radiator elements and simultaneously to compensate for the reactive component of the input impedance. A traveling-wave ratio of 0.8 in the 12% frequency band is thereby attained.

In order to achieve a circular radiation pattern with horizontal polarization, a pair of dipoles was located on the opposite sides of a screen (Fig. 2) and fed out of phase. The angle between the dipole arms is of predetermined magnitude to facilitate formation of the loop current necessary for the establishment of a uniform omnidirectional pattern. The optimum distances between the dipoles and the screen, the dipole angle, and the screen width were established experimentally. The balancing scheme with the U-elbow could not be used for the horizontal polarization system since it reduces the circularity of the radiation pattern. Instead a balancing system in the form of a coaxial line with a slot in the outer sleeve was used. While this system assures compactness.

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ACCESSION NR: AP5024724



Card  
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L 00268-66

ACCESSION NR: AP5024724

compactness, it introduces reactive components in the dipole input impedance, and an additional matching section is necessary to establish a traveling-wave ratio of 0.75 in the 12% frequency band.

The choice of the number of dipole elements is dictated by two contradictory considerations: 1) simplification of the feeder system, which points to a minimum number of elements, and 2) reduction of spurious radiation, which implies a maximum number of elements. With the chosen geometrical configuration and the requirement that the half-power beam-width be  $\theta = 5^\circ - 7^\circ$ , it was established that the number of elements needed was 4, 8, or 16. The best choice was found to be an eight-element array. Although the eight-element array forms considerable side lobes at  $\theta = \pm 90^\circ$ , they are easily attenuated to negligible levels by making the distance between the elements  $D = \lambda_0$  (for vertical polarization) and  $D = 0.8 \lambda_0$  (for horizontal polarization).

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L 00268-66

ACCESSION NR: AP5024724

For the feed system, a "Y" configuration was selected. It introduces constructional and manufacturing difficulties but assures an in-phase and balanced supply independent of frequency because the electrical path length to each element is equal. In this way the frequency band is limited only by the frequency range of the radiating elements. In order to avoid parasitic radiation, a balanced strip transmission line is utilized. The antenna input power is divided evenly between the radiating elements by the feed system, which includes a power divider, horizontal and vertical type coaxial-strip connectors, and impedance transformers. The antenna is protected from climatic changes by a solid cylindrical enclosure. The performance characteristics of the antenna are summarized in Table 1.

ASSOCIATION: Nauchno-tehnicheskoye obshchestvo radiotekhniki i elektrosvyazi im. A. S. Popova (Scientific-technical Society for Radioengineering and Electro-Communication)

SUBMITTED: 17Oct63

ENCL: 01

SUB CODE: EC

NR REF Sov: 003

OTHER: 006

FSB v. 1, no. 10

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L-00268-66  
ACCESSION NR: AP5024724

ENCLOSURE: 01

Table 1. Antenna performance characteristics

Antenna polarization	Gain, db			Max TWR in 12% band	Max circularity deviation, db			Half-power vertical beamwidth
	0.94 $f_0$	$f_0$	1.06 $f_0$		0.94 $f_0$	$f_0$	1.06 $f_0$	
Horizontal	10.3	10.5	7.8	0.65	$\pm 1.7$	$\pm 1.5$	$\pm 1.8$	$6.0^\circ - 6.8^\circ$
Vertical	10.7	11.1	10.3	0.61	$\pm 1.4$	$\pm 1.5$	$\pm 1.45$	$6.3^\circ - 7^\circ$

Card 6/8

SIRENKO, A.; ZHUK, N., starshiy inzh.

Determining weed content of grain by the standard sample method.  
Muk.-elev. prom. 27 no.10:21-22 0 '61. (MIRA 14:12)

1. Gosudarstvennaya khlebnaya inspeksiya Ministerstva  
zagotovok USSR. 2. Starshiy inspektor Gosudarstvennoy  
khlebnoy inspeksiya Ministerstva zagotovok USSR (for Sirenko).  
(Grain—Analysis)

SIRENKO, A.

Simplify the determination of the gluten quality of wheat.  
Muk.-elev. prom. 29 no.9:17-18 S '63. (MIRA 17:1)

1. Starshiy inspektor Gosudarstvennoy khlebnoy inspeksii  
Ministerstva proizvodstva i zagotovok sel'skokhozyaystvennykh  
produktov UkrSSR.

SIRENKO, A.

"Simplify the method for determining and calculating broken  
kernels in corn. Muk.-elev. prom. 29 no.7:27 Jl '63.  
(MIRA 17:1)

1. Starshiy inspektor Gosudarstvennoy khlebnoy inspeksii  
Ministerstva proizvodstva i zagotovok sel'skokhozyaystvennykh  
produktov UkrSSR.

SIRENKO, A.F., vetvrach

In vivo bacteriological investigation of the blood of animals.  
Veterinariia 36 no.3:76 Mr '59. (MIRA 12:4)

1. Voroshilovgradskaya mezhsovkhoznaya vetraklaboratoriya.  
(BLOOD--ANALYSIS AND CHEMISTRY)

SUBJECT USSR / PHYSICS CARD 1 / 2 PA - 1565  
AUTHOR PINES, B.JA., SIRENKO, A.F.  
TITLE Some Rules Governing the Mechanic Properties of Samples Produced  
by the Baking of Metal Powders.  
II. Tests at Increased Temperatures.  
PERIODICAL Žurn.techn.fis, 26, fasc.10, 2378-2386 (1956)  
Issued: 11 / 1956

The first report (B.JA.PINES, N.I.SUCHININ, Zurn.techn.fis, 26, 7 (1956)) showed that the mechanic strength of porous "metallic ceramic" samples (obtained by pressing and annealing metal powders at one and the same temperature) depends linearly on porosity. The present work describes breaking strength tests carried out at temperatures of up to 900° C in a H<sub>2</sub> atmosphere with samples of compressed powder which had previously been annealed for different lengths of time at a temperature of 1000° C. On this occasion load velocity was modified by 100 times its original amount. For samples of equal porosity which were tested at ~ 900° C the linear connection between the logarithm of load velocity and the value for strength resulting from the dependence of "life" on stress was confirmed. Samples with different porosity show a linear decrease of the strength p with a growing porosity  $\eta$  also when tested at high temperatures (with load velocity remaining constant), so that it is possible to determine the value for strength which is extrapolated for a growing porosity. The aforementioned linear connection

Zurn. techn. fis., 26, fasc. 10, 2378-2386 (1956) CARD 2 / 2 PA - 1565  
between  $p$  and  $\eta$  holds not only in the case of one-phase samples, but also in the case of mixtures of Cu + Fe-, and of Cu + Ni-powders. The strength  $p$  extrapolated for the porosity 0 has the following dependence on concentration also at  $800 - 900^{\circ}$  C (and at room temperature) in the annealed samples of the binary powder mixtures:  $p = p_1 (1-\varepsilon)^2 + p_2 \varepsilon^2 + 2 p_{12} \varepsilon (1-\varepsilon)$ . Here  $p_1$  and  $p_2$  denote the strength of the pure components at one and the same temperature, and  $p_{12}$  may be interpreted as the strength of contact with different signs. The aforementioned relation has been experimentally confirmed for samples of Cu + Fe and Cu + Ni powder mixtures. The values of elongation to breaking point are lower in porous samples and at high temperatures than in compact (cast) samples. In samples made from powder mixtures the are lower than additive values. The linear dependence of the elongation of the sample holds also on the occasion of tests carried out at high temperatures.

INSTITUTION:

SIRENKO, A.F.

57-8-32/36

AUTHORS Pines, B.Ya. Sirenko, A.F. Sukhinin N.I.  
TITLE Sintering of Non-Single-Phase Bodies. III. Sintering of  
Mixtures Containing Low-melting Components.  
PERIODICAL (Spekaniye neodnofaznykh tel. III. Spekaniye smesey,  
soderzhashchikh legkoplavkiye komponenty.)  
Zhurnal Tekhn. Fiz., 1957, Vol. 27, Nr 8, pp. 1893-1903  
(USSR)  
ABSTRACT The authors show that the contraction of pressed material  
of a single-component (copper-)powder essentially depends  
on the initial porosity caused by the pressure of compres-  
sion, or more exactly by the presence of the closed gas-  
filled pores. With the increase of pressure the contraction  
magnitude becomes smaller and furtheron its sign changes,  
i.e. the contraction is replaced by an "increase", the  
measurements of the pressed material becoming greater after  
sintering. The dependence of contraction on the pressure in-  
creases and becomes more complicated in the case of the  
sintering of powder-mixtures of copper with lowmelting  
additions of Pb, Sn, Bi, Cd. The additions promote the  
formation of closed pores which can lead to an "anomalous"  
decrease of contraction and also to "increase". The  
comparing investigations in vacuum and gas at atmospheric  
pressure, as well as an investigation of the sintering of

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*Sintering, etc.*

57-8-33/36

AUTHORS Pines, B.Ya., Sirenko, A.F., Sukhinin, N.I.  
TITLE Some Regularities of Mechanical Strength of Bodies  
Prepared by Sintering of Metal Powders. III. The Case of  
Powder Mixtures Containing Low-melting Components.  
(Nekotoryye zakonomernosti mekhanicheskoy prochnosti u tel,  
poluchennykh spekaniyem poroshkov metallov. III. Sluchay,  
kogda smesi poroshkov soderzhat legkoplavkiye komponenty.)  
PERIODICAL Zhurnal Tekhn. Fiz., 1957, Vol.27, № 8, pp. 1904-1911  
(USSR)  
ABSTRACT The authors show that the mechanical strength  $p$  of single-phase-powderpressed pieces which were burned of a powder of plastic metal (Cu) and at high temperature ( $1000^{\circ}\text{C}$ ) decreases with the increase of porosity within wide limits (0-40%) in such a way as would have to be expected in the case of a reduction of cross-sectional area. Here  $p$  depends only on the final porosity but not on the initial porosity of the pressed material. In the case of pieces pressed of Cu-powder mixture with low-melting components (like Pb and Sb) at  $1000^{\circ}$  an anomalous dependence of the real strength limit on the porosity  $\eta$  is observed. The dependent strength limit  $p'$  (in relation to the initial sample cross-section) changes with  $\eta$  in a normal way. These anomalies disappear in the case of weakly pressed samples and of samples with

CARD 1/2

PINES, B.Ya.; SIRENKO, A.F.

Temperature dependence of the mechanical strength and durability  
of powdered metals under load. Fiz. tver. tela 1 no.2:275-283 F  
'58. (MIRA 12:5)

(Cermets--Testing)

PINES, B.Ya.; SIRENKO, A.F.; SUKHININ, N.I.

Regularity of mechanical strength in solids prepared by the sintering  
of metal powders. Issl. po zharopr. splav. 3:326-338 '58.

(MIRA 11:11)

(Powder metallurgy) (Strength of materials)

AUTHORS: Pines, B. Ya. and Sirenko, A. E. SOV/126-6-2-9/34

TITLE: The Sintering of Ternary Metal Powder Mixtures  
(O spekanii troynykh smesey metallicheskikh poroshkov)

PERIODICAL: Fizika Metallov i Metallovedeniye, 1958, Vol 6, Nr 2,  
pp 261-267 (USSR)

ABSTRACT: Ternary mixtures are examined, and shown to exhibit the same square-law variation of shrinkage and yield point with component concentration as is shown by binary mixtures. Moreover, it is shown that the relevant constants in the laws can be derived from values for the corresponding three binary mixtures, by which they are completely defined, provided no complicating features, such as fusion of one of the components, or diffusion of one into another, occur. Fig.1 shows isothermal shrinkage curves for binary mixtures in the Ni-Cu-Fe system for brief, 15 mins and 3 hour heating to 1000°C respectively. Fig.2 shows the same for two ternary mixtures in this system (3.5 hours at 1000°C). Fig.3 reproduces Fig.1, but for the yield point, and Figs.4 and 5 Fig.2 in the same way. Fig.6 shows some data for the

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The Sintering of Ternary Metal Powder Mixtures SOV/126-6-2-9/34

extension to rupture.

There are 6 figures and 4 references, all of which are Soviet.

ASSOCIATION: Khar'kovskiy gosudarstvennyy universitet imeni A. M. Gor'kogo (Khar'kov State University imeni A.M.Gorkiy)

SUBMITTED: November 27, 1956

Card 2/2 1. Metal powders--Sintering 2. Sintering--Test results

AUTHORS: Pines, B. Ya., Sirenko, A. F. SOV/57-58-8-23/37

TITLE: Self-Diffusion and Heterodiffusion in Inhomogeneous Porous Bodies (Samodiffuziya i geterodiffuziya v neodnorodnykh poristykh telakh)  
II. The Direct and the Inverse Frenkel' Effect (II. pryamoy i obratnyy effekt Frenkelya)

PERIODICAL: Zhurnal tekhnicheskoy fiziki, 1958, Nr 8, pp. 1748 - 1752 (USSR)

ABSTRACT: The Kirkendall effect (displacement of the neutral marks at the boundary of interdiffusing metals) is caused by the inequality of the partial diffusion coefficients. This effect does not predetermine the occurrence of an additional porosity during diffusion. This is determined by the vacancy mechanism of diffusion. This effect was mentioned by Frenkel (Frenkel') a long time ago. Therefore, it is only fair to call it Frenkel effect. It can, however, also be interpreted by a self-diffusion of vacancies, which is due to the inequality of the partial coefficients of heterodiffusion. Apart from the direct Frenkel effect an inverse Frenkel effect must be expected. This effect

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SOV/57-58-8-23/37

Self-Diffusion and Heterodiffusion in Inhomogeneous Porous Bodies.  
II. The Direct and the Inverse Frenkel' Effect

is represented by a heterogeneity of concentration (produced by means of a rising diffusion), when the partial self-diffusion in the alloy is inhomogeneous. The inverse Frenkel effect was found experimentally in the sintering of samples of grains consisting of Cu-Ni-, Fe-Ni- and  $\alpha$ -brass alloys. The quantitative investigation of this effect is being continued. The results of this study will be published later.  
There are 2 figures, 1 table, and 5 references, 3 of which are Soviet.

ASSOCIATION: Gosudarstvenny universitet im. A. M. Gor'kogo, Khar'kov  
(State University imeni A. M. Gor'kiy, Khar'kov)

SUBMITTED: June 28, 1957

Card 2/2

AUTHORS:

Pines, B. Ya., Sirenko, A. F.

57-1-20/30

TITLE:

On the Sintering of Non-Singlephase Bodies (O spekanii ne-odnofaznykh tel). IV. On the Sintering of Powder Alloys of Difficultly Fusible Metals (IV. Spekaniye smesey poroshkov tugoplavkikh metallov).

PERIODICAL:

Zhurnal Tekhnicheskoy Fiziki, 1958, Vol. 28, Nr 1, pp. 150-158 (SSR)

ABSTRACT:

In this work data are given which were obtained on the occasion of sintering of binary powder alloys of difficultly fusible metals. It is demonstrated that on the occasion of the sintering of samples for which double alloys of difficultly fusible metals Cr-Mo, Cr-W, Ni-W were pressed together, a square dependence of the atrophy as well as of the tensile strength on the concentration was observed. The same character of the concentration dependence of the atrophy-resistance and the tensile strength with various systems, the components of which form limited and unlimited solid solutions is caused by the fact that the sintering process in the powder alloy leads to nonadditive effects due to the occurrences at the boundary of unlike grains. The total surface of the unlike contacts in the compound depends on the  $\xi$  - as well as also on the  $\xi(1 - \xi)$  concentration. The new formation of porosity if it occurs due to unlike partial hetero-diffusion,

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On the Sintering of Non-Singlephase Bodies. IV. On the Sintering 57-1-20/30  
of Powder Alloys of Difficultly Fusible Metals.

shows equally a concentration dependence of  $\epsilon$  ( $1 - \epsilon$ ). With mixtures of Cr-Mo and Cr-W-powders a partial diffusion of the Cr-atoms is mainly observed on the occasion of annealing at high temperatures. This agrees with the less bound heat of vaporization of Cr. With mixtures of the Ni-W-powders only a diffusion of the W-atoms in Ni is observed. In this case the rule on the prevailing diffusion of the component atoms with the less bound vaporizing heat is not valid since Ni and W have different crystal lattices and the solubility of Ni in W is very little. There are 13 figures, 9 references, 8 of which are Slavic.

ASSOCIATION: Khar'kov State University imeni A. M. Gor'kiy (Khar'kovskiy gosudarstvennyj universitet im. A. M. Gor'kogo).

SUBMITTED: November 24, 1956

AVAILABLE: Library of Congress

Card 2/2

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APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001550820010-9"

23(0)

AUTHORS:

Pines, B.Ya., Sirenko, A.F., Mel'nik, L.G. SOV/57-28-10-36/40

TITLE:

On the Resolving Power of the So-Called High-Dispersion X-Ray Photography (O razreshayushchey sposobnosti tak nazyvayemogo vysokodispersionnogo rentgenografirovaniya)

PERIODICAL:

Zhurnal tekhnicheskoy fiziki, Vol 28, Nr 10, pp 2344-2347 (USSR)

ABSTRACT:

This is a comparison of the resolving power of a reversal photograph as dependent upon the distance between the film and the sample. It was found that no increase in the resolving power of X-ray photographs is achieved even if the distance between film and sample is varied between 90 - 750 mm. An increase of D exceeding 100 to 150 mm is proved not to be expedient. This is due to the circumstance that when the resolving power of the photograph at great D is maintained, the negative influence of X-ray dispersion in air becomes more pronounced (leading to an increase of background in the X-ray photographs, and in a longer exposure of the photographs). There are 3 figures, 1 table, and 6 references, 6 of which are Soviet.

Card 1/2

On the Resolving Power of the So-Called High-Dispersion X-Ray Photography SOV/57-28-10-36/40

SUBMITTED: November 10, 1957

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SOV/3365

## PHASE I BOOK EXPLOITATION

18(7) Akademiya nauk SSSR. Institut metalurgii. Nauchnyj obozrenie po problemam zharkoprychynnyh spaliv. T. IV (Studies on Heat-resistant Materials for High-temperature Fuels). Izd-vo AN SSSR, 1959. 400 p. Izdelovaniya po zharkoprychynnym spalivam. T. 4, Moscov, Izd-vo AN SSSR, 1959. 2,200 copies printed. Krataj slip Izdeli. 2,200 copies printed.

Ed. of Publishing House: V. A. Klimov; Tech. Ed.: A. P. Guseva; Editorial Board: I. V. Bardin, Academician; O. V. Kurdyumov, USSR Academy of Scientists; N. V. Kiselev, Corresponding Member; I. P. Zudir, Candidate of Technical Sciences; I. A. Golov, I. M. Pavlov, and I. P. Zudir, Candidate of Technical Sciences.

PURPOSE: This book is intended for metallurgists concerned with the structural metallurgy of alloys.

CONTENTS: This is a collection of specialised studies of various problems in the structural metallurgy of heat-resistant alloys. Some are concerned with theoretical principles, some with descriptions of new equipment and methods, others with properties of specific materials. Various phenomena occurring under specified conditions are studied and reported on. For details, see Table of Contents. The articles are accompanied by a number of references, both Soviet and non-Soviet.

301 Finsen, B. Ya., and A. P. Svetenko. Investigation of Diffusion Creep in Germanium. 311 Balashin, M. Yu. Some Problems in the Theory of Sintering and Creep. 317 Orligor'yava, V. V., and V. M. Klymenko. Properties of Chromium Carbides and Carbides Based on Them. 323 Svet, D. Ya. Radiant Emissivity of Metals. 329 Prantsavitch, I. M., and V. A. Lavrenko. High Temperature Oxidation of Tungsten, Molybdenum, Tantalum, and Rhenium in the Recrystallized and Work-hardened States. 340 Arsharov, V. I., and B. S. Borisov. Effect of Alloying Elements on the Scale Resistance of Alloys and on Bond Strength in Oxide-phase Lattices in Scale. Effect of Nickel and the Combined Effect of Chrome and Nickel on the Bond Strength in Hematite

Card 10/12

SIRENKO, A. F.

PENSEE 1: MIGRATION SOY/2385

21 (61)

卷之三

Electrolytic problem of the strength of solids; a brief survey (Some Problems in the Strength of Solids; Collection of Articles) Moscow, Izd-vo AN SSSR, 1956, 2 vols. (2 vols. combined).

1959, 300 p. Printed in U.S.S.R. 2,000 copies printed.  
M. M. Publishing Bureau: V. I. Vaynshteyn Tech. Ed.: N. S. Pevzner;  
Editorial Board: A. P. Ioffe, Academician; G. V. Kurdyumov, Academician;  
B. N. Zhuravkov, Corresponding Member, USSR Academy of Sciences; S. P.  
Koontsevich, Corresponding Member, USSR Academy of Sciences; F. P. Vilenkin,  
Doctor of Physical and Mathematical Sciences, professor (Resp. Ed.) L. A.  
Ovchinnikov, Doctor of Technical Sciences, Professor M. A. Krasnoshchekov, Doctor of  
Physical and Mathematical Sciences; V. A. Stepanov, Doctor of Technical  
Sciences; Ya. B. Friedman, Doctor of Technical Sciences, professor; S. S. Ignat'ev,  
Candidate of Technical Sciences (Deputy Resp. Ed.).

**PURPOSE:** This book is intended for construction engineers, technologists, physicists and other persons interested in the strength of materials.

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